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Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

Sub-Committee of Experts on the Transport of Dangerous Goods

Forty-seventh session

Geneva, 22 June – 26 June 2015
Item 2 (h) of the provisional agenda
Explosives and related matters: revision of Chapter 2.1 of the GHS

Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals

Twenty-ninth session

Geneva, 29 June - 1 July 2015
Item 2 (a) of the provisional agenda
Classification criteria and related hazard communication: Work of the Sub-Committee of Experts on the Transport of Dangerous Goods (TDG) on matters of interest to the GHS Sub-Committee

GHS Classification of explosives

Transmitted by the Sporting Arms and Ammunition Manufacturers' Institute (SAAMI)[1]

Introduction

1. The Sub-Committee will recall that in the last biennium the Secretariat recommended that the forthcoming revised edition of the Manual of Tests and Criteria be updated to include, where applicable, relevant references to the GHS (see ST/SG/AC.10/C.3/2014/61–ST/SG/AC.10/C.4/2 014/8). This included a complete analysis of the Manual of Tests and Criteria with detailed recommendations in INF.8 (TDG) – INF.5 (GHS), including five addendums.

2. Also in the last biennium, the expert from Australia proposed a review of Chapter 2.1 of the GHS regarding explosives classification (see ST/SG/AC.10/C.3/2014/79 – ST/SG/AC.10/C.4/2014/15).

[1] In accordance with the programme of work of the Sub-Committee for 2015–2016 approved by the Committee at its seventh session (see ST/SG/AC.10/C.3/92, paragraph 95 and ST/SG/AC.10/42, para. 15)

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3. In conjunction with these proposals, SAAMI believes that some clarification of the GHS approach to explosives classification would be beneficial.

GHS explosives classification

4. According to GHS 1.1.2.6.2.1, classification depends on intrinsic properties. This approach is augmented per GHS 1.3.2.4.5.2, and the physical hazards of explosives are often altered by inclusion in an article and/or packaging. The principles and decision logic of the Manual of Tests and Criteria are founded in part on this principle. SAAMI is of the opinion that the mention of differences in the classification approach for explosives should be elevated within the introduction of the GHS. SAAMI proposes to amend paragraph 1.3.2.2.1 as shown in paragraph 9 below.

5. Section 2.1.4 states: "The decision logic and guidance, which follow, are not part of the harmonized classification system, but have been provided here as additional guidance...". The summary charts in Figures 2.1.1 to 2.1.3 are taken from the Manual of Tests and Criteria. SAAMI recommends that the charts be deleted and replaced by a reference to the Manual of Tests and Criteria. We feel that duplication is unnecessary and that it will be more efficient to have one version of each flow chart in the Manual of Tests and Criteria.

6. Section 2.1.2.2 states that explosives not classified as an unstable explosive are classified into a division based on the Manual of Tests and Criteria according to Table 2.1.1. SAAMI proposes to clarify that Table 2.1.1 is provided for guidance purposes and does not supersede the Manual of Tests and Criteria.

7. Table 2.1.1 provides a summary of the classification process in the Manual of Tests and Criteria. The tests in Series 2 and Series 3 are highlighted. Since Series 6 is the only series used to assign a division, it is very important and should be highlighted as well.

8. The intrinsic hazard of an "Explosion" is present in manufacturing when an explosive composition or article is formed. In manufacturing, the explosives as they move through the process are non-steady state, and cannot be assigned to a division of hazard. Such processes include feeding, mixing, blending, extruding, pressing, filling, assembly, etc. Risk management protocols require characterization of explosive substances and articles throughout the manufacturing process and the communication to affected workers regarding the potential operational hazards. Therefore it is most appropriate to classify the product as generally explosive, and not assign it to Divisions 1.1 to 1.6. Manufacturers should be allowed to voluntarily classify an explosive as an unstable explosive without comprehensive testing.

Proposal

Chapter 1.3

9. In paragraph 1.3.2.2.1, add a new sentence at the end of the paragraph as follows:

"1.3.2.2.1 The GHS uses the term "hazard classification" to indicate that only the intrinsic hazardous properties of substances or mixtures are considered. <u>In special cases, such as for explosives, alternative classification principles may apply.</u>"

Chapter 2.1

10. Amend paragraph 2.1.4 as follows:

"The decision logic and guidance~~, which follow, are not part of the harmonized classification system, but have been provided here as additional guidance~~ in the *UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria* apply. It is strongly recommended that the person responsible for classification studies the criteria before and during the use of the decision logic.".

11. Delete Figures 2.1.1, 2.1.2 and 2.1.3.

12. In paragraph 2.1.2.2, amend the end of the sentence before the table as follows:

"… ~~according to~~ as summarized by the following table."

13. Insert an entry in Table 2.1.1 below "Thermal stability" as follows:

"Assignment to a Division:	according to UN Test Series 6 (Section 16 of the *UN Recommendations on the Transport of Dangerous Goods, Manual of Tests & Criteria*).

14. Amend the sentence at the bottom of Table 2.1.1 as follows:

"~~Further tests are necessary to allocate the correct division.~~ A classification of unstable explosive may be voluntarily assigned to explosives in manufacturing or other processes without testing."